

Dynamic Positioning (DP)

This exercise will take place on a shuttle tanker, located at an offshore oilfield. The exercise will start with the vessel on DP, in the process of approaching a floating storage unit (FSU). Using DP control, the participants will be required to complete the approach, connect to the FSU and carry out procedures to commence loading a cargo of crude.

The oilfield is in operation and there is a field standby vessel. There will be vessel traffic in the vicinity. Along with operating the DP system, the participants will be required to safely navigate their vessel, while complying with collision regulations and all pertinent navigation practices.

This exercise will take place on a bridge simulator with full bridge functionality. DP, joystick, manual levers, radar, electronic chart, navigation lights, sound signals, etc. will all be available and expected to be used as required.

REFERENCES:

- DP System Manual Chapter (USB Stick) to be picked up at CMS W2104

Contact: Captain Glenn Fiander Glenn.Fiander@mi.mun.ca Office: CMS W2104

Exercise location: Heritage Bridge Simulator (Main floor - CMS)

Seamanship

This exercise challenges participants to demonstrate traditional seamanship skills, communicate with manual visual communication methods, and recognize lights, shapes, and signals from the International Regulations for Preventing Collisions at Sea (ColRegs).

The participating team will take on the assigned tasks of using the International Code of Signals' flags to send and receive messages, rig blocks and tackles and other equipment used for deck work, tie knots and splice rope, work with heaving lines and mooring lines, and demonstrate knowledge of the Collision Regulations. Some of the tasks are timed and all should be completed in the maximum allowable exercise time.

REFERENCES:

- Seamanship Techniques, D.J. House
- <http://www.seasources.net/PDF/PUB102.pdf> (INTERCO pp. 3, 6-8, 9sect.6, 22-23, Chapters 2&3)
One representative from each team can pick up a hard copy of INTERCO from Capt. Ennis.
- <http://www.surreyknots.org.uk/igkt-knot-charts.htm>
- <https://www.youtube.com/watch?v=O6Xc9RLL2g0>
- <https://paperzz.com/doc/8757468/rigging-stages--bosun-s-chair--and-rope-ladders>
- <http://www.animatedknots.com/index.php?Logolmage=LogoGrog.png&Website=www.animatedknots.com>
- https://laws-lois.justice.gc.ca/PDF/C.R.C.,_c._1416.pdf (Collision Regulations)

Contact: Captain John Ennis john.ennis@mi.mun.ca Office: W3006D

Exercise location: Rigging Room (First Floor- MI)

Emergency Management

This will be an exercise with the outcome having an impact on the Stability of the marine unit. Participants will be given a situation as if they were onboard a semi-submersible drilling rig during ballasting operations. During the operation they will encounter a marine emergency requiring them to effectively and efficiently evaluate the situation and manage it. Students in the simulator will be evaluated on the actions they take to protect themselves and the things around them. Additionally other students will undertake a theoretical question which will have them evaluate the stability condition of the drilling rig and other conditions.

REFERENCES:

- Stability Calculation & Management information will be distributed directly by Captain Victor March and Captain Try Nolan.

Contact: Captain Victor March Victor.March@mi.mun.ca Office: W2112 (CMS)
Captain Troy Nolan Troy.Nolan@mi.mun.ca Office W203

Exercise location: Ballast Control Simulator (Main Floor CMS)

Offshore Operations

Participants will use the Offshore Operations Simulator to complete this exercise. The ship model used will be an offshore anchor-handling vessel. Teams will be required to do all basic safety checks and manoeuvring checks of the vessel before proceeding towards an Anchored Mobile Offshore Drilling Unit (MODU).

When in the correct position at the MODU, the teams will receive the anchor pendant and chain chaser from the MODU's crane. They will then be able to use the chain chaser to follow the anchor chain laid on the bottom and attached to the rig's anchor mooring system.

When the chain reaches its end, the chain chair will be used with the ship's winch system to bring the anchor onto the deck of the vessel and return it to the MODU

Contact: Captain Eben March Ebenezer.March@mi.mun.ca Office: CMS Offshore Operations Bld Room W204

Exercise location: Offshore Operations Simulator (Main floor - CMS)

Shiphandling/Navigation

The exercises will take place in Port Aux Basque. Teams are to maneuver their ship off the berth safely outside the break water to an area where there is sufficient sea room and turn the vessel to proceed back into the harbour. They must then turn the ship again and back down towards the dock. The vessel will be initially positioned with the bow facing outward, starboard side to the dock.

To complete the exercise the vessel must be berthed starboard side to the dock wall with the bow facing outward again.

Teams will be assessed on safe navigation, communications, bridge teamwork and situational awareness will be critical

References:

- International Chamber of Shipping Bridge Procedures Guide
- Danton's The theory and practice of Seamanship, sections related to ship handling
- DJ House Seamanship Techniques, section related to ship handling
- Collision Regulations, appropriate to navigational safety and detection of targets and action to avoid collision
- The Library has a selection of texts on ship handling, other tips and tricks can be found on resources such as youtube.

Contact: Captain Chris Hearn Christopher.Hearn@mi.mun.ca Office: CMS W2100

Exercise location: Full Mission Bridge Simulator (Bottom floor - CMS)

Search and Rescue

The event will be a scenario where the participants will have to demonstrate the core STCW skills demanded of an FRB operator. The participants will launch and recover from a moving ship; search for and recover a survivor in the water; triage the survivor and return to the vessel. A simulator will be used for the Supply vessel bridge and another simulator for the FRB. Mechanical failures may be introduced in the scenario, and it is up to the FRB crew to identify/ demonstrate the ability to troubleshoot these issues.

REFERENCES:

- [Royal Canadian Marine Search and Rescue \(RCMSAR\)](#)
- [SAR Seamanship Reference Manual](#)

Contact: Dawn Patten; Dawn.Patten@virtualmarine.ca

Exercise location: TBD

Engine Room Simulator

This exercise will take place in the Marine Institute's Propulsion Plant Simulator; the MC90-V Slow Speed MAN B&W VLCC engine room simulator! The participants will be stationed in the engine room, where they have just changed watch on a fully loaded tanker destined for New York. The last watch has just finished reassembling the engine after routine maintenance but have not begun any of the preparations for departure. The participating team will need to start the main engine, confirm that sufficient power is available, and ensure all systems are ready for departure.

References:

1. Kongsberg MC90V Simulator Manual (USB Stick)
2. Chief Engineer's Standing Orders (available for viewing in room W1119)
3. <https://www.amsa.gov.au/sites/default/files/amsa242-watchkeeping-standards.pdf> (Watchkeeping Standards - section 4-2)
4. https://weh.maritime.edu/stcw/2018/images/STCW_Chap_VIII.pdf (Standards regarding watchkeeping).

Contact: Crystal Hanlon crystal.hanlon@mi.mun.ca Office W3014D

Exercise Location: Propulsion Plant Simulator (First Floor MI Room W1119)

Marine Engineering Shop

The competitors will be given a completely disassembled valve, gasket material, packing and all the necessary tools in order to complete the task. The competitors will be expected to reassemble the valve and make the necessary gaskets and packing in order to make the valve water tight. There will be no drawing or list of instructions provided.

Points will be awarded for the exercise on completing the task in a safe manner in the prescribed time. Points will also be awarded for a completed assembly that does not leak after pressure testing.'

Contact: Paul Bishop paul.bishop@mi.mun.ca

Exercise Location: Engine Shop (First Floor)